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ABSTRACT

A factor analysis, using the varimax rotated procedure, was conducted on Bem Sex-Role Inventory (BSRI) data from a random sampling of the national physical education organizations mailing list of physical education teachers. Of 458 potential respondents, 302 returned questionnaires, of which 298 complete questionnaires were used in the analysis. Means and standard deviations were computed and the analysis indicated (1) the BSRI scales may be multidimensional, (2) there are sex differences in the factor structure of the BSRI, (3) the feminine and masculine scales of the BSRI are independent, and (4) the factor structure found with the physical education population is similar to the factor structure found with other populations. The results suggest the revised BSRI may be a stronger instrument for subsequent sex-role research. (Author/PN)

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Factor Analysis of the Bem Sex-Role Inventory Using Data from Physical Educators

By

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RUNNING HEAD: BSRI Factor Analysis

Abstract

A factor analysis, using the varimax rotated procedure, was conducted on Bem Sex-Role Inventory (BSRI) data from physical education teachers. The analysis indicated 1) the BSRI scales may be multidimensional, 2) there are sex differences in the factor structure of the BSRI, 3) the feminine and masculine scales of the BSRI are independent, and 4) the factor structure found with the physical education population is similar to the factor structure found with other populations. The results suggest the revised BSRI may be a stronger instrument for subsequent sex-role research.

Key Words: BSRI Factor Analysis,
Sex-roles, Androgyny

Following the pioneering work of Bem (1974) on the androgyny sex-role model and the recent flourishing of sex-role research, challenges are being made to the instruments that are used to operationalize the evolving conceptual sex-role models. The four instruments generally used are the Bem Sex-Role Inventory (BSRI), the Personal Attributes Questionnaire, the Personality Research Form ANDRO scale and the masculinity and femininity scales of the Adjective Checklist (Wilson, 1980). However, the BSRI in particular, has been widely used and is being scrutinized for its validity and reliability.

To develop the BSRI, Bem (1974) tested the social desirability of 400 adjectives. Students were told "we would like you to indicate how desirable it is in American society for a man (woman) to possess each of these characteristics. Note: we are not interested in your personal opinion of how desirable each of these characteristics is. Rather, we want your judgment of how our society evaluates each of these characteristics in a man (woman)" (Bem, correspondence).

By using t-tests, Bem identified 40 adjectives that significantly differentiated between women and men. Twenty of the items are used for the BSRI femininity (expressive) scale and the other 20 items comprise the BSRI masculinity (instrumental) scale. Another 20 items do not differentiate between the sexes and are used as filler items. Using the BSRI, individuals are categorized as feminine, masculine, androgynous, or undifferentiated.

Experimental support was found for the accuracy of the BSRI classification system in predicting behaviors such as interacting with an infant and

listening to another person (Bem, 1974). The basic androgyny hypothesis asserts that individuals will be competent, comfortable, and attracted to situations requiring behaviors consistent with their sex-role self-perception. To test the androgyny hypothesis, Bem structured situations that involved playing with a kitten, interacting with an infant, listening, and rating cartoons. In general, the experimental data supported the androgyny hypothesis and indicated that the BSRI could be used to predict behavioral responses to certain situations.

The BSRI has been used in physical education research and has been discussed in the professional literature. Hoferek (1978) found that women in physical education tend to score androgynous while men in physical education tend to score masculine (when the t-test scoring method is used). The BSRI, however, did not accurately predict the values held by the physical educators in the study (Hoferek, in press). References to the BSRI, the concept it measures, and the implications for physical activity programs are discussed by Duquin (1978) and Hoferek (1980). While the BSRI has been used in physical education as well as interdisciplinary research, the instrument's validity and reliability have not been scrutinized with a physical education population.

Researchers in other disciplines have questioned the BSRI factor structure, the uniformity between the sexes, population differences, and the independence of the femininity and masculinity scales. Several studies have been conducted which examine the factor structure of the BSRI (Wilson, 1980; Richardson, et al, 1979; Gaudreau, 1977; Edwards et al; 1978; and Pedhazur & Tetenbaum, 1979). The data seem to indicate that the BSRI scales may

not be undimensional. For example, Richardson et al. (1979) found one major feminine factor but two masculine factors. Thus, the BSRI scales may be multidimensional.

Other researchers have suggested that there may be sex differences in the factor structure of the BSRI (Richardson et al., 1979; Powell, 1979; Pedhazur & Tetenbaum, 1979). For example, Pedhazur and Tetenbaum (1979) found four factors for women: (1) assertiveness, (2) interpersonal sensitivity, (3) a bipolar factor with independence at one pole and gullible and childlike at the other pole and (4) femininity and masculinity. The four factors found for men were (1) interpersonal sensitivity, (2) assertiveness, (3) self-sufficiency, and (4) a bipolar factor. On the other hand, Richardson et al. (1979) maintain that sex differences were minimal on the 10 item feminine factor, and the 9 item and 3 item masculine factors in their study.

Another issue addressed in the literature is the use of the BSRI with different populations (Powell, 1979). Powell (1979) concluded that there was strong support for two masculine factors (leadership and autonomy) and one feminine factor (empathy) when an analysis was done on 15 samples from various places.

A fourth major issue discussed in the literature about the BSRI is the independence of the femininity and masculinity scales. Edwards et al. (1978) conclude that "no single masculine or feminine factor exists for the instrument as a whole". Thus, one of the underlying assumptions of the androgyny model, the independence of masculinity and femininity, is questionable.

Given the discussions of the BSRI to date, an analysis of the instrument with scores from a physical education population was conducted. Since physical education teachers are activity oriented, they may represent a population that differs from the psychology student, general student, or other sedentary populations that were frequently used for the BSRI studies. Consistency of findings on the BSRI across studies with diverse populations would contribute to strengthening the conclusions about the BSRI whereas inconsistency would assist in defining problem areas for the instrument. Furthermore, an analysis of physical education patterns in relating to other studies would provide guidance to physical education researchers. Thus, this study examined each of the four major issues which have been raised in challenges to the BSRI. That is, data from physical education teachers were used to examine the factor structure of the BSRI, sex differences, population differences, and the independence of the femininity and masculinity scales.

Procedure

The BSRI was administered as part of a survey of physical educators across the United States. This study was conducted with regard for the rights of human subjects and complied with the ethical standards of the APA. The sample consisted of every forty-fourth person on the mailing list of the national physical education organization who had indicated a primary interest in elementary, secondary, or college/university physical education. Of the 485 potential respondents, 302 returned questionnaires. The corrected response rate was 67%. When missing data was considered, however, 298 questionnaires were actually used in the analyses.

To analyze the data, means and standard deviations were computed. The BSRI data was factor analyzed using the varimax rotated procedure. Separate analyses were done under the following conditions (1) women and men, all BSRI items, (2) women only, all BSRI items, (3) men only, all BSRI items, (4) women only, feminine and masculine items deleted, (5) men only, feminine and masculine items deleted, and (6) women and men, all BSRI items, masculine and feminine totals, sex of respondents, and BSRI difference scores. The cutoff for consideration of each item was a factor loading of .40 or greater.

Results

The table of means and standard deviations showed similar patterns for women and men on the BSRI items (Table 1). The only marked differences between the sexes occurred on the feminine and masculine items. Women rated themselves higher than men on the feminine item while men scored themselves higher than women on the masculine item.

While not the focus of this study, the pattern of responses for women and men on the individual BSRI items was particularly interesting. Stereotypically, one would expect the highest scores for women to be on the first 20 items and the highest scores for men to be on the last 20 items. However, looking at items with high ratings, those over 6.00 on a scale where 7.00 is maximum, one notes that both women and men physical educators rated themselves high on loyal, loves children, self-reliant, independent, athletic, and self-sufficient. In addition, men physical educators rated themselves high on defends own beliefs and masculine. For women to rate themselves somewhat evenly on the first 20 items and the last 20 items was consistent

with their generally scoring androgynous on the BSRI while for men to rate themselves somewhat higher on the last 20 items was consistent with their tendency to score instrumental on the BSRI.

Insert Table 1 about here

The factor analysis for both sexes and all BSRI items yielded five factors (Table 2). An interpersonal factor which includes ten items (cheerful, affectionate, sympathetic, sensitive, understanding, compassionate, soothes, warm, tender, gentle) from the femininity scale of the BSRI was the first factor. The second factor was an assertive - instrumental factor which includes ten items (defends own beliefs, assertive, strong personality, forceful, analytical, risks, dominant, takes a stand, acts as a leader, individualistic) from the BSRI masculinity scale. The third factor was bipolar with a negative feminine item and a positive masculine item. Three independence items (self-reliant, independent, self-sufficient) from the BSRI masculine scale formed the fourth factor. Shy and soft spoken, with negative loadings comprised the fifth factor.

Insert Table 2 about here

When separate analyses were conducted for women and men, the factor structure changed somewhat (Tables 3 & 4). The ten items in the first factor, the interpersonal factor, were retained for both sexes although the

loadings changed. Sex differences emerged on the remaining factors. For women, the second factor was a ten item instrumental factor, the third was a bipolar shy-aggressive factor, the fourth was the independence factor, and the fifth was the bipolar masculine-feminine factor with the loves children item added.

For men, the second and third factors consisted of items from the BSRI masculine scale, the fourth factor was the independence factor, and the fifth was a leadership factor.

Insert Tables 3 and 4 about here

Other studies (Pedhazur & Tetenbaum, 1979) have suggested that the feminine and masculine items tapped the sex of the subject. That is, rather than measuring the constructs masculine and feminine, the two BSRI items seemed to measure the sex of the subject. Therefore, an argument has been made for analysis with the masculine and feminine items deleted.

When separate analyses were conducted for physical education women and men with the feminine and masculine items deleted, the factor structure changed somewhat (Tables 5 & 6). For women, the first factor continued to be the interpersonal factor and the 10 items are retained. The second factor also remained the same. The bipolar shy-aggressive factor was repeated as the third factor but the dominant item was added to the factor structure. Independence was retained as the fourth factor. The bipolar

feminine-masculine factor dropped out as the fifth factor and a three item leadership-aggressive factor entered.

Insert Table 5 about here

When the feminine and masculine items were deleted for men, the 10 item interpersonal factor was retained as the first factor (Table 6). The second factor was repeated; however, the strong personality and makes decisions easily items were added to this factor structure. The independence factor, which was the fourth factor became the third factor. Four items which were part of the third factor became a fourth factor and were a risk - assertive factor. The last factor consisted of the gullible and childlike items.

Insert Table 6 about here

Another analysis suggested in the literature (Gaudreau, 1977) involved the addition of the masculine total, the feminine total, the sex of the respondent, and the difference score (feminine total - masculine total).

When all of the BSRI items, the masculine and feminine totals, sex of respondent, and BSRI difference scores were entered, several patterns emerged. Twelve feminine scale items loaded with the feminine scale total and with the BSRI difference score. Eleven of the loadings were positive while one, the shy item, was negative. Twelve of the masculine scale items

loaded positively with the masculine total and as expected, negatively with the BSRI difference score. The feminine and masculine items had high (.900) loadings with the sex of the respondent. The fourth and fifth factors consisted of the independence and gullible-childlike factors respectively.

Insert Table 7 about here

Discussion

Based on the results of this study, several challenges to the BSRI could be supported. First, the BSRI scales may be multidimensional. For example, an independence factor, which contained items from the original masculinity scale, emerged as the fourth factor in the analysis for both sexes. Furthermore, the feminine and masculine items were clearly sex-linked. Thus, the original scales, especially the masculinity scale, appeared to be multidimensional.

Sex differences did appear in the factor structure of the BSRI, particularly on the masculinity scale. For example, masculine scale items comprised the second and third factors for men. For women, however, the third factor was a bipolar factor with items from the expressive (femininity) scale and the instrumental (masculinity) scale.

Challenges to the independence of the two BSRI scales were not upheld by this study. That is, the femininity and masculinity scales did appear to

be independent. No feminine scale items loaded positively with the masculine scale items and vice-versa.

In comparison to other populations reported in the literature, the most notable difference for physical educators is the importance of the interpersonal factor. In most studies, unlike the physical education data, the masculine factor appeared first. While the ordering change is noteworthy, the items that clustered together are similar to other studies and support the factor structure found by other investigators.

In light of the current research, the modification Bem (1979) has incorporated into the revised version of the BSRI would seem to strengthen the instrument. Bem proposed shortening the BSRI to exclude some of the items that weakened the factor structure of the instrument. The items retained for the instrumental (masculine) scale are: defend my own beliefs, independent, assertive, strong personality, forceful, have leadership abilities, willing to take notes, dominant, willing to take a stand, and aggressive. The items retained for the expressive (feminine) scale are: affectionate, sympathetic, sensitive to the needs of others, understanding, compassionate, eager to soothe hurt feelings, warm, tender, love children, and gentle. While the proposed revision would reduce some problem areas such as the one created by the masculine and feminine items, some difficulties may remain. For example, the instrumental (masculinity) scale may continue to be multidimensional.

In conclusion, a factor analysis of the BSRI using data from physical educators supported several concerns about the BSRI that have been reported in the psychological literature recently. The revision Bem (1979) has proposed appears to strengthen the instrument. Further research is needed, however, before firm conclusions can be made.

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Table 1.

BSRI Item Means and Standard Deviations

	Women and Men		Women		Men	
BSRI Items	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Yielding	4.29	1.13	4.28	1.07	4.30	1.31
Cheerful	5.83	0.85	5.85	0.83	5.79	0.90
Shy	3.40	1.43	3.38	1.44	3.47	1.43
Affectionate	5.56	1.12	5.50	1.11	5.68	1.12
Flatterable	4.28	1.39	4.22	1.38	4.41	1.41
Loyal	6.43	0.65	6.38	0.68	6.52	0.61
Feminine	3.95	2.23	5.35	1.29	1.36	0.84
Sympathetic	5.60	1.00	5.55	1.02	5.70	0.95
Sensitive to needs	5.91	0.85	5.89	0.86	5.95	0.85
Understanding	5.84	0.80	5.86	0.80	5.79	0.81
Compassionate	5.51	1.05	5.43	1.07	5.63	1.02
Eager to soothe	5.46	1.18	5.43	1.21	5.50	1.14
Soft Spoken	4.18	1.64	3.96	1.66	4.53	1.53
Warm	5.44	1.02	5.38	1.01	5.57	0.99
Tender	5.17	1.18	5.14	1.17	5.25	1.16
Gullible	3.28	1.37	3.41	1.44	3.05	1.23
Childlike	2.30	1.17	2.31	1.17	2.25	1.19
No harsh language	4.62	1.87	4.70	1.93	4.44	1.77
Loves children	6.10	1.07	6.02	1.11	6.27	0.97

Gentle	5.58	1.06	5.49	1.05	5.71	1.07
Self-reliant	6.22	0.78	6.24	0.85	6.23	0.66
Defends own beliefs	5.98	0.96	5.90	0.98	6.15	0.92
Independent	6.19	0.87	6.30	0.82	6.00	0.94
Athletic	6.21	0.88	6.14	0.90	6.36	0.82
Assertive	5.01	1.11	4.98	1.12	5.11	1.11
Strong personality	5.59	1.16	5.59	1.12	5.59	1.26
Forceful	4.78	1.26	4.67	1.22	4.97	1.32
Analytical	5.27	1.27	5.20	1.31	5.45	1.16
Has leadership abilities	5.74	0.93	5.72	0.87	5.78	1.01
Willing to take risks	4.96	1.25	4.88	1.18	5.12	1.37
Makes decisions easily	4.85	1.25	4.72	1.26	5.10	1.16
Self-sufficient	6.16	0.84	6.18	0.88	6.13	0.79
Dominant	4.36	1.43	4.26	1.35	4.55	1.58
Masculine	3.78	2.28	2.39	1.42	6.37	0.91
Takes a stand	5.66	1.06	5.55	1.11	5.92	0.89
Aggressive	4.78	1.28	4.75	1.21	4.88	1.41
Acts as a leader	5.47	1.04	5.45	0.99	5.54	1.09
Individualistic	5.55	1.09	5.46	1.14	5.73	1.02
Competitive	5.68	1.22	5.53	1.24	5.98	1.10
Ambitious	5.62	1.12	5.54	1.20	5.79	0.90
	N=298		N=189		N=102	

Table 2

Varimax Rotated Factor Matrix - Women and Men

BSRI Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.226	-0.112	0.049	-0.022	-0.168
Cheerful	0.538	0.000	-0.109	0.157	0.146
Shy	-0.073	-0.147	0.057	-0.091	-0.643
Affectionate	0.535	0.186	0.012	0.038	0.116
Flatterable	0.310	0.113	0.017	0.036	0.148
Loyal	0.263	0.249	0.007	0.115	-0.079
Feminine	0.120	-0.086	-0.901	0.107	0.051
Sympathetic	0.684	0.195	0.013	0.047	-0.085
Sensitive to needs	0.740	0.163	-0.023	0.109	-0.030
Understanding	0.646	0.180	-0.110	0.173	-0.106
Compassionate	0.779	0.208	0.028	0.049	-0.027
Eager to soothe	0.590	0.102	0.016	-0.031	0.033
Soft spoken	0.334	-0.027	0.111	0.001	-0.526
Warm	0.650	0.057	-0.007	0.029	0.127
Tender	0.683	0.181	-0.051	0.065	-0.086
Gullible	0.056	-0.049	-0.121	-0.135	-0.044
Childlike	-0.084	-0.106	0.027	-0.077	-0.013
No harsh language	0.214	-0.003	-0.113	0.012	-0.066
Loves children	0.385	0.003	-0.015	-0.140	0.100
Gentle	0.677	0.015	0.011	0.095	-0.155

Self-reliant	0.125	0.193	0.010	0.547	0.098
Defends own beliefs	0.178	0.749	-0.008	0.105	0.057
Independent	-0.014	0.289	-0.178	0.653	0.081
Athletic	0.165	0.106	0.076	0.198	-0.044
Assertive	0.079	0.586	0.022	0.162	0.323
Strong personality	0.273	0.491	-0.055	0.259	0.361
Forceful	0.058	0.599	0.024	0.177	0.201
Analytical	0.136	0.489	0.082	0.061	-0.208
Has leadership abilities	0.246	0.296	-0.041	0.111	0.035
Willing to take risks	0.192	0.427	0.067	0.113	0.086
Makes decisions easily	0.039	0.348	0.078	0.175	0.053
Self-sufficient	0.130	0.175	-0.027	0.708	-0.014
Dominant	-0.099	0.406	0.100	0.127	0.368
Masculine	-0.046	0.124	0.911	-0.033	-0.095
Takes a stand	0.129	0.755	0.075	0.101	0.036
Aggressive	0.036	0.368	0.042	0.123	0.335
Acts as a leader	0.178	0.404	-0.028	0.090	0.204
Individualistic	0.211	0.482	0.050	0.325	0.011
Competitive	0.030	0.315	0.110	-0.013	0.006
Ambitious	0.277	0.170	-0.011	0.089	-0.083

Table 3.

Varimax Rotated Factor Matrix - Women only

BSRI Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.216	-0.055	-0.146	-0.021	-0.030
Cheerful	0.517	0.061	0.014	0.143	0.339
Shy	-0.047	-0.168	-0.664	-0.127	-0.173
Affectionate	0.583	0.192	0.190	-0.048	0.074
Flatterable	0.242	0.085	0.302	0.075	0.148
Loyal	0.238	0.227	0.001	0.116	0.079
Feminine	0.377	0.074	-0.013	0.120	0.597
Sympathetic	0.756	0.102	-0.088	0.121	-0.001
Sensitive to needs	0.749	0.181	-0.085	0.038	0.081
Understanding	0.590	0.249	-0.085	0.111	0.129
Compassionate	0.795	0.166	-0.060	0.038	0.040
Eager to soothe	0.558	0.100	0.110	-0.043	0.055
Soft spoken	0.336	-0.076	-0.574	0.029	0.044
Warm	0.651	0.079	0.172	-0.015	0.226
Tender	0.692	0.197	-0.038	0.045	0.089
Gullible	0.062	-0.046	-0.035	-0.067	0.060
Childlike	-0.027	-0.056	-0.014	-0.129	-0.137
No harsh language	0.095	-0.006	-0.049	0.002	0.131
Loves children	0.358	-0.053	0.070	-0.121	0.425
Gentle	0.606	0.097	-0.120	0.054	0.221

Self-reliant	0.131	0.144	0.087	0.600	-0.046
Defends own beliefs	0.204	0.747	0.026	0.145	0.098
Independent	-0.059	0.325	0.066	0.659	0.123
Athletic	0.201	0.128	-0.012	0.178	0.037
Assertive	0.140	0.582	0.381	0.160	-0.006
Strong personality	0.302	0.507	0.439	0.201	0.118
Forceful	0.031	0.622	0.228	0.188	0.089
Analytical	0.171	0.3995	-0.224	0.090	-0.249
Has leadership abilities	0.248	0.447	0.018	0.049	0.271
Willing to take risks	0.177	0.464	0.044	0.087	-0.017
Makes decisions easily	0.031	0.285	-0.066	0.207	0.151
Self-sufficient	0.061	0.190	0.023	0.672	-0.006
Dominant	-0.066	0.458	0.397	0.123	-0.061
Masculine	-0.163	-0.034	-0.070	-0.007	-0.668
Takes a stand	0.173	0.789	0.006	0.119	-0.020
Aggressive	0.024	0.380	0.477	0.111	-0.076
Acts as a leader	0.106	0.528	0.131	0.071	0.303
Individualistic	0.254	0.499	0.103	0.266	-0.110
Competitive	0.002	0.333	0.078	-0.039	-0.116
Ambitious	0.293	0.136	-0.018	0.034	0.125

Table 4.

Varimax Rotated Factor Matrix - Men Only

BSRI Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.234	-0.290	-0.037	-0.057	-0.052
Cheerful	0.546	-0.020	0.077	0.067	0.153
Shy	-0.104	-0.281	-0.145	0.024	0.016
Affectionate	0.615	0.198	0.116	0.101	0.094
Flatterable	0.367	0.238	0.160	-0.023	0.182
Loyal	0.159	0.105	0.137	0.190	0.154
Feminine	-0.010	-0.092	-0.168	0.061	-0.032
Sympathetic	0.489	0.055	0.248	-0.015	0.085
Sensitive to needs	0.588	0.104	0.125	0.189	0.230
Understanding	0.648	-0.005	0.123	0.226	0.078
Compassionate	0.712	0.090	0.185	0.082	0.064
Eager to soothe	0.589	0.064	0.085	-0.051	0.144
Soft spoken	0.258	-0.087	0.030	-0.008	-0.018
Warm	0.757	0.057	-0.045	0.085	0.128
Tender	0.838	0.022	0.006	0.131	-0.168
Gullible	0.061	-0.043	-0.087	-0.167	0.009
Childlike	-0.198	-0.061	-0.243	0.083	-0.142
No harsh language	0.283	0.026	0.133	-0.154	0.352
Loves children	0.221	0.152	-0.003	-0.114	0.111
Gentle	0.776	-0.191	0.031	0.099	-0.054

Self-reliant	0.216	0.169	0.236	0.458	0.176
Defends own beliefs	0.118	0.220	0.643	0.224	0.171
Independent	0.108	0.250	0.118	0.675	0.032
Athletic	0.029	0.081	0.159	0.176	0.407
Assertive	0.109	0.539	0.515	0.169	-0.043
Strong personality	0.272	0.388	0.443	0.355	0.218
Forceful	0.030	0.708	0.428	0.215	0.005
Analytical	0.183	0.259	0.533	0.056	-0.001
Has leadership abilities	0.227	0.343	0.183	0.212	0.674
Willing to take risks	0.172	0.211	0.479	0.149	0.213
Makes decisions easily	0.176	0.376	0.344	0.261	0.058
Self-sufficient	0.334	0.118	0.195	0.628	0.128
Dominant	-0.117	0.722	0.182	0.133	0.113
Masculine	0.052	0.737	0.473	-0.099	0.212
Takes a stand	0.031	0.279	0.593	0.243	0.165
Aggressive	0.052	0.758	0.177	0.103	0.205
Acts as a leader	0.275	0.447	0.216	0.175	0.637
Individualistic	0.165	0.205	0.097	0.655	0.086
Competitive	0.012	0.414	0.154	0.115	0.295
Ambitious	0.206	0.553	0.090	0.290	0.213

Table 5.

Varimax Rotated Factor Matrix - Women Only - Feminine and Masculine Items Deleted

BSRI Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.198	-0.053	-0.143	-0.022	-0.019
Cheerful	0.526	0.078	-0.003	0.157	0.102
Shy	-0.068	-0.167	-0.659	-0.129	0.060
Affectionate	0.607	0.176	0.194	-0.046	0.142
Flatterable	0.254	0.081	0.306	0.078	0.339
Loyal	0.242	0.229	0.003	0.114	0.067
Sympathetic	0.759	0.098	-0.081	0.119	0.001
Sensitive to needs	0.741	0.183	-0.085	0.038	0.113
Understanding	0.586	0.252	-0.083	0.111	0.181
Compassionate	0.803	0.157	-0.050	0.036	-0.105
Eager to soothe	0.552	0.099	0.111	-0.042	-0.052
Soft Spoken	0.319	-0.056	-0.584	0.026	0.023
Warm	0.665	0.086	0.157	-0.007	0.090
Tender	0.709	0.192	-0.034	0.041	0.209
Gullible	0.067	-0.041	-0.042	-0.059	0.044
Childlike	-0.029	-0.064	-0.007	-0.136	-0.095
No harsh language	0.104	-0.003	-0.050	0.005	0.026
Loves children	0.360	-0.019	0.041	-0.111	0.003
Gentle	0.619	0.106	-0.124	0.053	0.313
Self-reliant	0.128	0.147	0.094	0.589	-0.031

Defends own beliefs	0.217	0.745	0.034	0.143	-0.036
Independent	-0.059	0.347	0.063	0.657	0.018
Athletic	0.204	0.113	-0.017	0.192	-0.005
Assertive	0.139	0.582	0.385	0.148	0.052
Strong personality	0.309	0.514	0.447	0.184	0.193
Forceful	0.038	0.616	0.241	0.178	0.188
Analytical	0.156	0.392	-0.211	0.074	0.083
Has leadership abilities	0.291	0.426	0.042	0.059	0.404
Willing to take risks	0.157	0.467	0.039	0.085	0.102
Makes decisions easily	0.042	0.299	-0.074	0.215	-0.029
Self sufficient	0.074	0.170	0.038	0.692	0.142
Dominant	-0.075	0.446	0.404	0.117	0.145
Takes a stand	0.183	0.778	0.014	0.115	-0.052
Aggressive	0.016	0.360	0.483	0.107	0.420
Acts as a leader	0.140	0.517	0.146	0.082	0.211
Individualistic	0.240	0.505	0.106	0.245	0.044
Competitive	-0.004	0.308	0.083	-0.042	0.154
Ambitious	0.312	0.123	-0.008	0.030	0.738

Table 6.

Varimax Rotated Factor Matrix - Men Only - Feminine and Masculine Items Deleted

BSRI Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.258	-0.270	-0.091	0.074	-0.350
Cheerful	0.546	-0.004	0.102	0.039	0.009
Shy	-0.089	-0.279	-0.004	-0.064	-0.321
Affectionate	0.622	0.220	0.104	0.077	0.128
Flatterable	0.382	0.271	-0.008	0.095	-0.300
Loyal	0.158	0.124	0.177	0.110	0.315
Sympathetic	0.468	0.067	-0.002	0.223	-0.013
Sensitive to needs	0.574	0.102	0.208	0.105	0.083
Understanding	0.636	0.004	0.231	0.119	0.163
Compassionate	0.706	0.117	0.073	0.200	-0.108
Eager to soothe	0.597	0.076	-0.036	0.059	-0.020
Soft spoken	0.272	-0.056	-0.016	-0.035	0.102
Warm	0.751	0.045	0.081	-0.038	0.021
Tender	0.827	0.026	0.107	0.049	0.004
Gullible	0.061	-0.065	-0.168	-0.018	-0.601
Childlike	-0.182	-0.087	0.095	-0.244	-0.700
No harsh language	0.289	0.038	-0.080	0.005	0.060
Loves children	0.215	0.145	-0.102	-0.019	-0.002
Gentle	0.776	-0.180	0.111	0.051	0.020
Self reliant	0.218	0.215	0.492	0.144	0.270

Defends own beliefs	0.119	0.324	0.156	0.684	0.238
Independent	0.097	0.265	0.699	0.072	0.160
Athletic	0.045	0.106	0.153	0.180	0.209
Assertive	0.116	0.630	0.155	0.354	0.166
Strong personality	0.269	0.453	0.341	0.372	0.128
Forceful	0.024	0.771	0.194	0.309	0.062
Analytical	0.186	0.343	0.061	0.401	0.234
Has leadership abilities	0.222	0.341	0.209	0.166	0.068
Willing to take risks	0.171	0.281	0.112	0.500	0.008
Makes decisions easily	0.174	0.436	0.256	0.269	0.084
Self sufficient	0.330	0.155	0.607	0.203	0.264
Dominant	-0.120	0.737	0.117	0.092	-0.039
Takes a stand	0.026	0.371	0.198	0.603	-0.034
Aggressive	0.044	0.755	0.102	0.083	0.053
Acts as a leader	0.262	0.444	0.149	0.240	-0.021
Individualistic	0.149	0.211	0.659	0.129	-0.223
Competitive	0.014	0.428	0.071	0.173	0.021
Ambitious	0.200	0.548	0.279	0.040	0.301

Table 7.

Varimax Rotated Factor Matrix With All BSRI Items, Masculine and Feminine Totals, Sex, and BSRI Difference Scores.

BSRI Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Yielding	0.214	-0.140	0.045	-0.026	0.224
Cheerful	0.575	0.0[illegible]	-0.112	0.184	-0.050
Shy	-0.032	-0.251	0.089	-0.079	0.224
Affectionate	0.592	0.214	0.032	0.047	0.058
Flatterable	0.308	0.186	0.029	0.034	0.356
Loyal	0.218	0.195	0.058	0.153	-0.150
Feminine	0.139	-0.093	-0.909	0.093	0.072
Sympathetic	0.658	0.190	-0.002	-0.000	-0.150
Sensitive to needs	0.709	0.197	-0.054	0.054	-0.184
Understanding	0.623	0.187	-0.131	0.177	-0.193
Compassionate	0.765	0.211	0.017	0.021	-0.056
Eager to soothe	0.604	0.098	0.020	-0.080	0.155
Soft spoken	0.348	-0.123	0.149	0.046	-0.117
Warm	0.721	0.072	0.006	0.026	0.085
Tender	0.762	0.138	-0.021	0.087	0.133
Gullible	0.089	-0.062	-0.126	-0.135	0.547
Childlike	-0.091	-0.098	-0.002	-0.080	0.570
No harsh language	0.164	-0.038	-0.088	0.023	0.114
Loves children	0.409	-0.020	0.053	-0.134	-0.057

Gentle	0.723	0.005	0.025	0.111	0.071
Self-reliant	0.115	0.223	-0.001	0.563	-0.126
Defends own beliefs	0.198	0.708	0.030	0.107	-0.150
Independent	-0.013	0.306	-0.177	0.624	-0.038
Athletic	0.171	0.185	0.091	0.178	-0.036
Assertive	0.102	0.656	0.033	0.173	0.048
Strong personality	0.289	0.591	-0.067	0.257	0.030
Forceful	0.053	0.708	0.050	0.173	-0.017
Analytical	0.135	0.431	0.106	0.090	-0.136
Has leadership abilities	0.256	0.495	-0.127	-0.014	-0.074
Willing to take risks	0.198	0.538	0.053	0.072	-0.054
Makes decisions easily	0.096	0.378	0.100	0.184	-0.214
Self sufficient	0.120	0.256	-0.059	0.608	-0.222
Dominant	-0.079	0.592	0.086	0.111	0.045
Masculine	-0.075	0.138	0.901	-0.022	-0.018
Takes a stand	0.161	0.753	0.089	0.089	-0.081
Aggressive	0.016	0.545	0.032	0.094	-0.066
Acts as a leader	0.195	0.599	-0.115	-0.024	-0.100
Individualistic	0.235	0.498	0.057	0.358	0.175
Competitive	0.023	0.414	0.148	-0.014	-0.035
Ambitious	0.315	0.274	0.038	0.110	-0.098
Feminine total	0.852	0.045	-0.166	0.047	0.274
Masculine total	0.198	0.836	0.198	0.304	-0.095
Sex	0.064	0.087	0.915	-0.062	-0.048
BSRI Difference	0.444	-0.671	-0.285	-0.222	0.277

Author Notes

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